

- [54] **KEYLESS FLAT PANEL PORTABLE COMPUTER—COMPUTER AIDED NOTEBOOK**
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[56] **References Cited**

U.S. PATENT DOCUMENTS

4,058,849	11/1977	Fitzgerald et al.	364/520
4,517,660	5/1985	Fushimoto et al.	364/708
4,571,456	2/1986	Paulsen et al.	179/2
4,730,186	3/1988	Koga et al.	178/18
4,752,965	6/1988	Dunkley et al.	382/3

FOREIGN PATENT DOCUMENTS

0254561 1/1988 European Pat. Off. .

OTHER PUBLICATIONS

Brochure of Linus Technologies, Inc. for Write-Top Specifications, undated.
 Canon AI Note(book), Manual for IN-3000, 1988 (cover, pp. 1, 12, 13 & cover), in the Japanese language.

McCormick, John, "An Intelligent Clipboard", *ID Systems* (Sep. 1988), pp. 25-29.

Waters, Tom, "Back to Basics", *Discover* (Dec. 1988), pp. 26-27.

Brochure of Takenaka of Japan for T-board, undated, in the Japanese language.

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[57] **ABSTRACT**

A keyboardless portable computer simulates a foldable notepad and has a display which can be reoriented to the convenience of the user, carried in a self-protecting closed position and operated in any convenient open position. The computer has a first flat panel, a second flat panel and hinge means for joining the first panel to the second panel such that the first flat surface is juxtaposed to the second flat surface in a closed position and is disposed side by side in a common plane in one of a selection of open positions. The first flat surface comprises a first digitizer and the second flat surface comprises a second digitizer, and a stylus is provided which is connectable to at least one of the panels for interacting with at least one of the digitizers. One of the digitizers includes a flat panel display through which visual output is provided. Thus, registration of a written symbol on the surface of the panel produces a displayed symbol, preferably at the position of registration. The panels may be detachable at the hinge means, folded back to back to one another for compact usage and a second hinge on a digitizer panel permits a bound paper notebook to be interleaved with a thin digitizer.

19 Claims, 13 Drawing Sheets

